Math 212
Quiz 24

W 26 Oct 2016

Your name: _____

Exercise

(2 pt) Let $E \subseteq \mathbf{R}^3$ be the region bounded by (i.e. inside) the cylinder $x^2 + y^2 = 4$ and the planes $z = 0$ and $z = 2$.

(a) (0.5 pt) Sketch the region E.

(b) (1.5 pt) Evaluate the triple integral

$$\iiint_E z e^{x^2+y^2} \, dV.$$

Hint: Use cylindrical coordinates. Mind the integration factor.